GOOLY CONSULTANCY SERVICES
ISO 9001 : 2015 Certified & NABL Accreditated Laboratory as per ISO/IEC - 17025 - 2017
Corporate off : No. 230, Opp. G.R. Lavender Apartments, Sai Enclave Layout, Kothanur Dinne, J.P. Nagar 8th Phase, Bangalore - 560 076.
Contact: +91-80-42277023/24, 9535200024, Email : info@gcsfirm.com, goolyconsultancyservices@yahoo.com, www.gcslabindia.com

Lab ID : GCS-138-10119-1

Date : 17/02/2021

TEST REPORT ON PHYSICAL PROPERTIES OF CEMENT

Name of Client:	Executive Engineer Bruhat Bangalore Mahanagara Palike
Address:	Yelahanka Division
Package No:	Package - 04
Name of Work:	Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name Contractor:	M/s Nandi Constructions
Name of PMC:	M/s Gooly Consultancy services, Bangalore
Date of Receipt:	18.01.2021
Sample ID No:	10119-1
Location:	Ch:0.00 to 381m ward 4, B sector 13th B main, drain
Sampling :	Sample Received from the site and Tested
Sample Identification*:	Dalmia OPC 33 grade
Reference to BIS codes:	**Test Method:**
	IS 4031(Part 1):1996(RA 2016) Determination Of Fineness By Dry Sieving
	IS 4031 (Part 4):1988 (RA 2019) Determination Of Consistency Of Standard Cement Paste
	IS 4031 (Part 5):1988 (RA 2019) Determination Of Initial & Final Setting Time
	IS 4031 (Part 6):1988 (RA 2019) Determination Of Compressive Strength
	IS 4031 (Part 11):1988 (RA 2019) Determination Of Density
	Specification :
	IS 1489 (Part - 2) : 1991 Portland pozzolona Cement- Specification (3rd revision)
Condition of sample:	Satisfactory
Date of test:	19/01/2021 to 16/02/2021

Sl.No	Physical properties	Results	Units	Requirement as per IS 269: 2015		
				33 Grade	43 Grade	53 Grade
1	Standard Consistency	26	%	Not specified	Not specified	Not specified
2	Initial Setting time	160	minutes	Min 30 minutes	Min 30 minutes	Min 30 minutes
3	Final Setting time	290	minutes	Max 600 minutes	Max 600 minutes	Max 600 minutes
4	Fineness by dry sieving	6.1	%	–	–	–
8	Density	3.16	g/cm^3	–	–	–

Testing of Construction Material - Mechanical & Chemical, Soil & Non Destructive Testing Services, Project Management Consultancy, Third Party Quality Assurance, Detailed Project Report, Rehabilitation, Road Safety Review & Structural design

Date : 17/02/2021

Sample ID No: 10119-1

Sl.No	Physical properties	Results	Units	Requirement as per IS 269: 2015		
				33 Grade	43 Grade	53 Grade
9	Compressive Strength					
	3 Days	17.5	N/mm^2	Min 16 N/mm^2	Min 23 N/mm^2	Min 27 N/mm^2
	7 Days	23.0	N/mm^2	Min 22 N/mm^2	Min 33 N/mm^2	Min 37 N/mm^2
	28 Days	34.0	N/mm^2	Min 33 N/mm^2, Max 48 N/mm^2	Min 43 N/mm^2, Max 58 N/mm^2	Min 53 N/mm^2

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the IS 1489 (Part - 2) Specification/Project Requirement.

1. The test results pertain to the number of sample Received and Tested
2. Any correction in the report will make this report invalid.
3. This report without prior written approval should not be reproduced or published in full or part.
4. Samples will be disposed after 90 days from the date of issue of test certificate.

Gooly Consultancy Services Bangalore

Prepared By: Deepthi PT

Tested By: Pushpa D.B

Project Manager

Lab ID : GCS-138-10119-2
Date : 23/01/2021

TEST REPORT ON MECHANICAL PROPERTIES OF COARSE AGGREGATES

Name of Client:	Executive Engineer Bruhat Bangalore Mahanagara Palike
Address:	Yelahanka Division
Package No:	Package - 04
Name of Work:	Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name Contractor:	M/s Nandi Constructions
Name of PMC:	M/s Gooly Consultancy services, Bangalore
Date of Receipt:	18.01.2021
Sample ID No:	10119-2
Location:	Ch:0.00 to 381m ward 4, B sector 13th B main, drain
Sample Identification*:	20mm down size Coarse Aggregate
Sampling :	Sample Received from the site and Tested
Reference to BIS codes:	**Test Method:**
	IS 2386 (Part 1) : 1963 (RA 2016) Particle Size And Shape Cl.2
	IS 2386 (Part 3) : 1963 (RA 2016) Specific gravity, density, voids, absorption and bulking
	IS 2386 (Part 4) : 1963 (RA 2016) Mechanical Properties
	Specification:
	IS 383 : 2016 Coarse And Fine Aggregate For Concrete
Condition of sample:	Satisfactory
Date of test:	19/01/2021 to 27/01/2021

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM COARSE AGGREGATE:

Total weight taken: 5000 grams

Sl.No	Sieve Designation	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Requirement as per IS 383: 2016 Table-7 (Cl 6.1 & 6.2)	
						Graded	Single-Sized
1	40 mm	0	0	0	100	100	100
2	20 mm	352	352	7.04	92.96	90-100	85-100
3	10 mm	3241	3593	71.86	28.14	25-55	0-20
4	4.75 mm	1203	4796	95.92	4.08	0-10	0-5
5	Pan	204	5000	100	0	---	---

Date : 23/01/2021

Sample ID No: 10119-2

MECHANICAL PROPERTIES

Sl.No	Tests	Result	Requirements as per IS 383 : 2016
1	Flakiness Index (%)	11.20	Combined flakiness & elongation index shall not exceed 40 % for uncrushed or crushed aggregate
2	Elongation Index (%)	12.50	
3	Bulk density (Loose) (kg/l)	1.51	–
4	Bulk density (Compacted) (kg/l)	1.60	–
5	Specific Gravity	2.66	–
6	Water Absorption (%)	0.15	–
7	Aggregate crushing strength (%)	24	For Aggregates to be used in concrete for wearing surfaces, (such as runways, roads, pavements, tunnel lining carrying water, spillways and stilling basins): Max 30 %

Remarks:-

The tested samples meets the requirements of IS 383 : 2016 specification/project requirement where as the gradation confirms to graded aggregate.

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2. Any correction in the report will make this report invalidate
3. This report without prior written approval should not be reproduced or published in full or part.
4. Samples will be disposed after 90 days from the date of issue of test certificate.

Gooly Consultancy Services Bangalore

Prepared By: Pushpa D B

Tested By: Vikas K Kaushik

Project Manager

Lab ID : GCS-138-10119-2
Date : 25.01.2021

TEST REPORT ON PHYSICAL PROPERTIES OF FINE AGGREGATE

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 04
Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name Contractor: M/s Nandi Constructions
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Receipt: 18.01.2021
Sample ID No: 10116-2
Location: Ch:0.00 to 381m ward 4, B sector 13th B main, drain
Sampling : Sample Received from the site and Tested
Sample Identification*: M-Sand
Reference to BIS codes: **Test Method:**

IS 2386 (Part 1) : 1963 (RA 2016) Particle Size And Shape Cl.2
IS 2386 (Part 3) : 1963 (RA 2016) Specific gravity, density, voids, absorption and bulking
IS 2386 (Part 4) :1963 (RA 2016) Mechanical Properties

Specification:

IS 383 : 2016 Coarse and fine aggregate for concrete

Condition of sample: Satisfactory
Date of test: 19/01/2021 to 23/01/2021

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF FINE AGGREGATE:

Total weight taken: **1000 grams**

SL.No	Sieve Designation	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383 : 2016 Table-9, (Cl-6.3)				Remarks
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV	
1	10 mm	0	0	0	100	100	100	100	100	The tested Sample confirms to Grading Zone- II
2	4.75 mm	0	0	0	100	90-100	90-100	90-100	95-100	
3	2.36 mm	65	65	6.5	93.5	60-95	75-100	85-100	95-100	
4	1.18 mm	314	379	37.9	62.1	30-70	55-90	75-100	90-100	
5	600 micron	245	624	62.4	37.6	15-34	35-59	60-79	80-100	
6	300 micron	290	914	91.4	8.6	5-20	8-30	12-40	15-50	
7	150 micron	54	968	96.8	3.2	0-10	0-10	0-10	0-15	
8	Pan	32	1000	100	0	---	---	---	---	

Date : 25.01.2021

Sample ID No: 10119-3

PHYSICAL PROPERTIES

Sl.No	Tests	Result	Requirements as per IS 383 : 2016 Table-3, (Cl-5.7)
1	Bulk density (compacted)	1.54	–
2	Bulk density (Loose)	1.5	–
3	Specific Gravity	2.64	2.1 to 3.2
4	Water Absorption (%)	0.78	5% Max
5	Finer tham 75 micron	8	10% Max

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the IS 383 : 2016 Specification/Project Requirement with respect to above tests conducted

1. The test results pertain to the number of Sample Received from the site and Tested
2. Any correction in the report will make this report invalid.
3. This report without prior written approval should not be reproduced or published in full or part.
4. Samples will be disposed after 90 days from the date of issue of test certificate.

Gooly Consultancy Services Bangalore

Prepared By: Pushpa D B

Tested By: Sri Charan

Project Manager

Lab ID : GCS-138-10119-4
Date : 25.01.2021

TEST REPORT ON MECHANICAL PROPERTIES OF REINFORCEMENT STEEL

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 04
Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)

Name Contractor: M/s Nandi Constructions
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Receipt: 18.01.2021
Location: Ch:0.00 to 381m ward 4, B sector 13th B main, drain
Sampling : Sample Received from the site and Tested
Reference to BIS codes: **Test Method:**
IS 1608 (Part 1) : 2018, Metallic Materials, Tensile Testing, Method of Test at Room Temperature
IS 1786 : 2008 (RA 2018) High strength deformed steel bars and wires for concrete reinforcement - Bend & Rebend Test
Specification:
IS 1786 : 2008 (RA 2018) High strength deformed steel bars and wires for concrete reinforcement
Condition of sample: Satisfactory
Date of test: 19/01/2021 to 23/01/2021

Sl. No	Sample Identification	Sample ID No	Nominal size (dia in mm)	Mass per meter (kg/meter)	TENSILE STRENGTH				Bend Test	Re Bend Test
					0.20 % proof stress/ yield stress (N/mm^2)	Tensile strength (N/mm^2)	TS/YS ratio	Elongation percent on gauge length		
1	RD TMT Fe 550	10119-4/1a	08	0.396	708	783	1.10	25.0	–	–
	RD TMT Fe 550	10119-4/1b	08	0.394	–	–	–	–	No Rupture or Crack Visible	–
	RD TMT Fe 550	10119-4/1c	08	0.395	–	–	–	–	–	No Rupture or Crack Visible

Sl. No	Sample Identification	Sample ID No	Nominal size (dia in mm)	Mass per meter (kg/meter)	TENSILE STRENGTH				Bend Test	Re Bend Test
					0.20 % proof stress/ yield stress (N/mm^2)	Tensile strength (N/mm^2)	TS/YS ratio	Elongation percent on gauge length		
2	RD TMT Fe 550	20338-1/2a	10	0.579	606	668	1.10	24.0	–	–
	RD TMT Fe 550	20338-1/2b	10	0.577	–	–	–	–	No Rupture or Crack Visible	–
	RD TMT Fe 550	20338-1/2c	10	0.578	–	–	–	–	–	No Rupture or Crack Visible

Sl. No	Sample Identification	Sample ID No	Nominal size (dia in mm)	Mass per meter (kg/meter)	TENSILE STRENGTH				Bend Test	Re Bend Test
					0.20 % proof stress/ yield stress (N/mm^2)	Tensile strength (N/mm^2)	TS/YS ratio	Elongation percent on gauge length		
3	RD TMT Fe 550	20338-1/3a	12	0.885	601	663	1.1	25	–	–
	RD TMT Fe 550	20338-1/3b	12	0.887	–	–	–	–	No Rupture or Crack Visible	–
	RD TMT Fe 550	20337-1/3c	12	0.886	–	–	–	–	–	No Rupture or Crack Visible

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the IS 1786 : 2008 Specification/Project Requirement.

1. The test results pertain to the number of samples Received from the site and Tested
2. Any correction in the report will make this report invalid.
3. This report without prior written approval should not be reproduced or published in full or part.
4. Samples will be disposed after 90 days from the date of issue of test certificate.

Prepared By:
Sushma

Tested By:
Ashwini

Gooly Consultancy Services Bangalore

GOOLY CONSULTANCY SERVICES
ISO 9001 : 2015 Certified & NABL Accreditated Laboratory as per ISO/IEC - 17025 - 2017
Corporate off : No. 230, Opp. G.R. Lavender Apartments, Sai Enclave Layout, Kothanur Dinne, J.P. Nagar 8th Phase, Bangalore - 560 076.
Contact: +91-80-42277023/24, 9535200024, 8431662730, Email : info@goolyconsultancy.com, goolylab@gmail.com, Website : www.goolyconsultancy.com

Lab ID : GCS-138-10116-5
Date : 13.03.2021

TEST REPORT ON CEMENT CONCRETE CUBES

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 04
Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name of Contractor: M/s Nandi Constructions
Name of PMC: M/s Gooly Consultancy services, Bangalore
Sample Identification*: C C Cube / 150mmx150mmx150mm / M - 20 / 28 days Compressive Strength

Reference to BIS codes:
Test Method:
IS 516 : 1959 (RA 2018) Methods Of Tests For Strength Of Concrete Cl.5
Specification:
IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice

Condition of sample: Satisfactory

Compressive strength : 20N/mm^2 as per IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice

Sl.No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm^2)	Average Compressive strength of 3 Cubes (N/mm^2)
Ward-04, Sharada Nagara											
1	1/1	Arch main road	M-20	21-Jan-21	18-Feb-21	150*150 *150	22500	8473	465	20.7	21.0
	1/2	Arch main road	M-20	21-Jan-21	18-Feb-21	150*150 *150	22500	8477	455	20.2	
	1/3	Arch main road	M-20	21-Jan-21	18-Feb-21	150*150 *150	22500	8480	495	22.0	
2	1/1	1st main LHS	M-20	21-Jan-21	18-Feb-21	150*150 *150	22500	8549	495	22.0	20.8
	1/2	1st main LHS	M-20	21-Jan-21	18-Feb-21	150*150 *150	22500	8411	455	20.2	
	1/3	1st main LHS	M-20	21-Jan-21	18-Feb-21	150*150 *150	22500	8566	455	20.2	
3	1/1	5th Cross	M-20	21-Jan-21	18-Feb-21	150*150 *150	22500	8473	465	20.7	20.9
	1/2	5th Cross	M-20	21-Jan-21	18-Feb-21	150*150 *150	22500	8477	460	20.5	
	1/3	5th Cross	M-20	21-Jan-21	18-Feb-21	150*150 *150	22500	8480	485	21.6	
4	1/1	7th Cross road	M-20	21-Jan-21	18-Feb-21	150*150 *150	22500	8473	455	20.2	20.6
	1/2	7th Cross road	M-20	21-Jan-21	18-Feb-21	150*150 *150	22500	8477	465	20.7	
	1/3	7th Cross road	M-20	21-Jan-21	18-Feb-21	150*150 *150	22500	8480	470	20.9	
5	1/1	8th Cross road	M-20	23-Jan-21	20-Feb-21	150*150 *150	22500	8473	485	21.6	21.3
	1/2	8th Cross road	M-20	23-Jan-21	20-Feb-21	150*150 *150	22500	8477	495	22.0	
	1/3	8th Cross road	M-20	23-Jan-21	20-Feb-21	150*150 *150	22500	8480	455	20.2	
6	1/1	7th Main road	M-20	23-Jan-21	20-Feb-21	150*150 *150	22500	8473	455	20.2	20.6
	1/2	7th Main road	M-20	23-Jan-21	20-Feb-21	150*150 *150	22500	8477	460	20.5	
	1/3	7th Main road	M-20	23-Jan-21	20-Feb-21	150*150 *150	22500	8480	475	21.1	

Sl.No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm²)	Average Compressive strength of 3 Cubes (N/mm²)
7	1/1	4th Main road	M-20	23-Jan-21	20-Feb-21	150*150 *150	22500	8473	485	21.6	21.2
	1/2	4th Main road	M-20	23-Jan-21	20-Feb-21	150*150 *150	22500	8477	485	21.6	
	1/3	4th Main road	M-20	23-Jan-21	20-Feb-21	150*150 *150	22500	8480	460	20.5	
8	1/1	4th Main road	M-20	23-Jan-21	20-Feb-21	150*150 *150	22500	8473	455	20.2	20.9
	1/2	4th Main road	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8477	475	21.1	
	1/3	4th Main road	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8480	480	21.3	
Ward - 04 Someshwara Nagara 3rd B Main Road											
9	1/1	3rd B Main Road	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8473	490	21.8	21.8
	1/2	3rd B Main Road	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8477	495	22.0	
	1/3	3rd B Main Road	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8480	485	21.6	
10	1/1	3rd A Main Road	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8473	465	20.7	21.0
	1/2	3rd A Main Road	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8477	455	20.2	
	1/3	3rd A Main Road	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8480	495	22.0	
11	1/1	Sai apartment main road	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8473	455	20.2	20.4
	1/2	Sai apartment main road	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8477	465	20.7	
	1/3	Sai apartment main road	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8480	455	20.2	
12	1/1	Sai apartment main road	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8473	475	21.1	20.7
	1/2	Sai apartment main road	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8477	465	20.7	
	1/3	Sai apartment main road	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8480	455	20.2	
13	1/1	4th A Cross Road	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8473	460	20.5	20.9
	1/2	4th A Cross Road	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8477	470	20.9	
	1/3	4th A Cross Road	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8480	480	21.3	
14	1/1	5th A Cross Road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8478	485	21.6	21.6
	1/2	5th A Cross Road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8453	490	21.8	
	1/3	5th A Cross Road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8478	480	21.3	
15	1/1	4th A Cross Road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8473	475	21.1	21.0
	1/2	4th A Cross Road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8477	460	20.5	
	1/3	4th A Cross Road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8480	480	21.3	
16	1/1	5th A road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8473	490	21.8	21.8
	1/2	5th A road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8477	485	21.6	
	1/3	5th A road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8480	495	22.0	

Sl.No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm^2)	Average Compressive strength of 3 Cubes (N/mm^2)
17	1/1	5th A Cross Dead end Road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8473	455	20.2	20.7
	1/2	5th A Cross Dead end Road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8477	465	20.7	
	1/3	5th A Cross Dead end Road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8480	475	21.1	
18	1/1	5th B Cross Road	M-20	01-Feb-21	01-Mar-21	150*150 *150	22500	8478	485	21.6	21.7
	1/2	5th B Cross Road	M-20	01-Feb-21	01-Mar-21	150*150 *150	22500	8453	495	22.0	
	1/3	5th B Cross Road	M-20	01-Feb-21	01-Mar-21	150*150 *150	22500	8478	485	21.6	
19	1/1	4th B Cross Road	M-20	01-Feb-21	01-Mar-21	150*150 *150	22500	8473	480	21.3	21.1
	1/2	4th B Cross Road	M-20	01-Feb-21	01-Mar-21	150*150 *150	22500	8477	490	21.8	
	1/3	4th B Cross Road	M-20	01-Feb-21	01-Mar-21	150*150 *150	22500	8480	455	20.2	
20	1/1	3rd A Cross Road	M-20	01-Feb-21	01-Mar-21	150*150 *150	22500	8473	460	20.5	21.0
	1/2	3rd A Cross Road	M-20	01-Feb-21	01-Mar-21	150*150 *150	22500	8480	475	21.1	
	1/3	3rd A Cross Road	M-20	01-Feb-21	01-Mar-21	150*150 *150	22500	8473	485	21.6	
21	1/1	3rd B Cross Road	M-20	03-Feb-21	03-Mar-21	150*150 *150	22500	8477	495	22.0	21.5
	1/2	3rd B Cross Road	M-20	03-Feb-21	03-Mar-21	150*150 *150	22500	8480	480	21.3	
	1/3	3rd B Cross Road	M-20	03-Feb-21	03-Mar-21	150*150 *150	22500	8473	475	21.1	
22	1/1	2nd A Cross Road	M-20	03-Feb-21	03-Mar-21	150*150 *150	22500	8480	465	20.7	20.7
	1/2	2nd A Cross Road	M-20	03-Feb-21	03-Mar-21	150*150 *150	22500	8473	475	21.1	
	1/3	2nd A Cross Road	M-20	03-Feb-21	03-Mar-21	150*150 *150	22500	8477	455	20.2	
23	1/1	2nd B Cross Road	M-20	03-Feb-21	03-Mar-21	150*150 *150	22500	8480	455	20.2	20.8
	1/2	2nd B Cross Road	M-20	03-Feb-21	03-Mar-21	150*150 *150	22500	8473	465	20.7	
	1/3	2nd B Cross Road	M-20	03-Feb-21	03-Mar-21	150*150 *150	22500	8477	485	21.6	
24	1/1	2nd B Cross Road	M-20	03-Feb-21	03-Mar-21	150*150 *150	22500	8480	490	21.8	21.8
	1/2	2nd B Cross Road	M-20	03-Feb-21	03-Mar-21	150*150 *150	22500	8473	495	22.0	
	1/3	2nd B Cross Road	M-20	03-Feb-21	03-Mar-21	150*150 *150	22500	8477	485	21.6	
25	1/1	1st A Cross Road	M-20	05-Feb-21	05-Mar-21	150*150 *150	22500	8480	480	21.3	21.0
	1/2	1st A Cross Road	M-20	05-Feb-21	05-Mar-21	150*150 *150	22500	8460	470	20.9	
	1/3	1st A Cross Road	M-20	05-Feb-21	05-Mar-21	150*150 *150	22500	8475	465	20.7	
26	1/1	1st A Cross Road	M-20	05-Feb-21	05-Mar-21	150*150 *150	22500	8466	460	20.5	21.3
	1/2	1st A Cross Road	M-20	05-Feb-21	05-Mar-21	150*150 *150	22500	8472	485	21.6	
	1/3	1st A Cross Road	M-20	05-Feb-21	05-Mar-21	150*150 *150	22500	8466	490	21.8	

Sl.No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm^2)	Average Compressive strength of 3 Cubes (N/mm^2)
27	1/1	1st B Cross Road	M-20	05-Feb-21	05-Mar-21	150*150 *150	22500	8453	455	20.2	20.6
	1/2	1st B Cross Road	M-20	05-Feb-21	05-Mar-21	150*150 *150	22500	8562	465	20.7	
	1/3	1st B Cross Road	M-20	05-Feb-21	05-Mar-21	150*150 *150	22500	8340	470	20.9	
28	1/1	1st B Cross Road	M-20	05-Feb-21	05-Mar-21	150*150 *150	22500	8426	475	21.1	21.5
	1/2	1st B Cross Road	M-20	05-Feb-21	05-Mar-21	150*150 *150	22500	8439	485	21.6	
	1/3	1st B Cross Road	M-20	05-Feb-21	05-Mar-21	150*150 *150	22500	8426	490	21.8	
29	1/1	Compound Road	M-20	08-Feb-21	08-Mar-21	150*150 *150	22500	8436	460	20.5	28.9
	1/2	Compound Road	M-20	08-Feb-21	08-Mar-21	150*150 *150	22500	8460	765	34.0	
	1/3	Compound Road	M-20	08-Feb-21	08-Mar-21	150*150 *150	22500	8572	725	32.2	
30	1/1	Someshwara nagar perpendicular road	M-20	08-Feb-21	08-Mar-21	150*150 *150	22500	8407	770	34.2	34.1
	1/2	Someshwara nagar perpendicular road	M-20	08-Feb-21	08-Mar-21	150*150 *150	22500	8522	777	34.5	
	1/3	Someshwara nagar perpendicular road	M-20	08-Feb-21	08-Mar-21	150*150 *150	22500	8437	756	33.6	
Ward - 04 Chikkabommasandra											
31	1/1	3rd main road	M-20	08-Feb-21	08-Mar-21	150*150 *150	22500	8562	465	20.7	20.9
	1/2	3rd main road	M-20	08-Feb-21	08-Mar-21	150*150 *150	22500	8340	470	20.9	
	1/3	3rd main road	M-20	08-Feb-21	08-Mar-21	150*150 *150	22500	8426	475	21.1	
32	1/1	3rd main road	M-20	10-Feb-21	10-Mar-21	150*150 *150	22500	8439	485	21.6	21.3
	1/2	3rd main road	M-20	10-Feb-21	10-Mar-21	150*150 *150	22500	8426	490	21.8	
	1/3	3rd main road	M-20	10-Feb-21	10-Mar-21	150*150 *150	22500	8436	460	20.5	
33	1/1	3rd Cross	M-20	10-Feb-21	10-Mar-21	150*150 *150	22500	8436	465	20.7	20.6
	1/2	3rd Cross	M-20	10-Feb-21	10-Mar-21	150*150 *150	22500	8493	470	20.9	
	1/3	3rd Cross	M-20	10-Feb-21	10-Mar-21	150*150 *150	22500	8435	455	20.2	
34	1/1	2nd Cross	M-20	10-Feb-21	10-Mar-21	150*150 *150	22500	8495	455	20.2	20.9
	1/2	2nd Cross	M-20	10-Feb-21	10-Mar-21	150*150 *150	22500	8450	475	21.1	
	1/3	2nd Cross	M-20	10-Feb-21	10-Mar-21	150*150 *150	22500	8453	480	21.3	
35	1/1	2nd Cross	M-20	12-Feb-21	12-Mar-21	150*150 *150	22500	8562	465	20.7	20.9
	1/2	2nd Cross	M-20	12-Feb-21	12-Mar-21	150*150 *150	22500	8340	470	20.9	
	1/3	2nd Cross	M-20	12-Feb-21	12-Mar-21	150*150 *150	22500	8426	475	21.1	
36	1/1	3rd cross Road	M-20	12-Feb-21	12-Mar-21	150*150 *150	22500	8439	485	21.6	21.6
	1/2	3rd cross Road	M-20	12-Feb-21	12-Mar-21	150*150 *150	22500	8426	490	21.8	
	1/3	3rd cross Road	M-20	12-Feb-21	12-Mar-21	150*150 *150	22500	8493	486	21.6	

Sl.No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm^2)	Average Compressive strength of 3 Cubes (N/mm^2)
47	1/1	11th B main	M-20	28-Jan-21	25-Feb-21	150*150 *150	22500	8473	515	22.9	22.8
	1/2	11th B main	M-20	28-Jan-21	25-Feb-21	150*150 *150	22500	8477	525	23.3	
	1/3	11th B main	M-20	28-Jan-21	25-Feb-21	150*150 *150	22500	8480	500	22.2	
48	1/1	1st B Main	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8473	483	21.5	21.6
	1/2	1st B Main	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8477	485	21.6	
	1/3	1st B Main	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8480	488	21.7	
49	1/1	3rd Main road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8473	500	22.2	21.9
	1/2	3rd Main road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8477	495	22.0	
	1/3	3rd Main road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8480	485	21.6	
50	1/1	4th B park road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8473	498	22.1	22.3
	1/2	4th B park road	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8477	495	22.0	
	1/3	4th B park road	M-20	02-Feb-21	02-Mar-21	150*150 *150	22500	8480	510	22.7	
51	1/1	11th B cross road	M-20	02-Feb-21	02-Mar-21	150*150 *150	22500	8473	515	22.9	23.1
	1/2	11th B cross road	M-20	02-Feb-21	02-Mar-21	150*150 *150	22500	8477	520	23.1	
	1/3	11th B cross road	M-20	02-Feb-21	02-Mar-21	150*150 *150	22500	8480	525	23.3	
52	1/1	11th B cross road	M-20	02-Feb-21	02-Mar-21	150*150 *150	22500	8888	520	23.1	22.5
	1/2	11th B cross road	M-20	02-Feb-21	02-Mar-21	150*150 *150	22500	8891	510	22.7	
	1/3	11th B cross road	M-20	02-Feb-21	02-Mar-21	150*150 *150	22500	8560	485	21.6	
53	1/1	12th B main	M-20	05-Feb-21	05-Mar-21	150*150 *150	22500	8473	510	22.7	22.5
	1/2	12th B main	M-20	05-Feb-21	05-Mar-21	150*150 *150	22500	8477	520	23.1	
	1/3	12th B main	M-20	05-Feb-21	05-Mar-21	150*150 *150	22500	8480	487	21.7	
54	1/1	12th B main	M-20	06-Feb-21	06-Mar-21	150*150 *150	22500	8473	515	22.9	22.2
	1/2	12th B main	M-20	06-Feb-21	06-Mar-21	150*150 *150	22500	8477	495	22.0	
	1/3	12th B main	M-20	06-Feb-21	06-Mar-21	150*150 *150	22500	8480	485	21.6	
55	1/1	9th B Road	M-20	08-Feb-21	08-Mar-21	150*150 *150	22500	8473	495	22.0	23.2
	1/2	9th B Road	M-20	08-Feb-21	08-Mar-21	150*150 *150	22500	8477	483	21.5	
	1/3	9th B Road	M-20	08-Feb-21	08-Mar-21	150*150 *150	22500	8480	590	26.2	

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Contact: +91-80-42277023/24, 9535200024, 8431662730, Email : info@goolyconsultancy.com, goolylab@gmail.com, Website : www.goolyconsultancy.com

Sl.No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm^2)	Average Compressive strength of 3 Cubes (N/mm^2)
SS	1/1	9th B Road	M-20	10-Feb-21	10-Mar-21	150*150 *150	22500	8478	487	21.7	21.6
	1/2	9th B Road	M-20	10-Feb-21	10-Mar-21	150*150 *150	22500	8453	485	21.6	
	1/3	9th B Road	M-20	10-Feb-21	10-Mar-21	150*150 *150	22500	8478	483	21.5	

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the IS 456 : 2000 specification / project requirement with respect to above tests conducted.

1. The test results pertain to the number of samples as furnished by the customer
2. Any correction in the report will make this report invalid.
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4. Samples will be disposed after 90 days from the date of issue of test certificate

Prepared By:
pushpa

Tested By:
Ashwini

Gooly Consultancy Services Bangalore

Project Manager

Lab ID : GCS-138-10119-5
Date : 3/16/2021

TEST REPORT ON CEMENT CONCRETE CUBES

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 04
Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name of Contractor: M/s Nandi Constructions
Name of PMC: M/s Gooly Consultancy services, Bangalore
Sample Identification*: C C Cube / 150mmx150mmx150mm / M - 30 / 28 days Compressive Strength
Reference to BIS codes: **Test Method**:
IS 516 : 1959 (RA 2018) Methods Of Tests For Strength Of Concrete Cl.5
Specification:
IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice
Condition of sample: Satisfactory

Compressive strength : 30N/mm^2 as per IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice

Sl.No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm^2)	Average Compressive strength of 3 Cubes (N/mm^2)
1	1/1	3rd main 2nd cross road	M-30	12-Feb-21	12-Mar-21	150*150 *150	22500	8432	700	31.1	31.6
	1/2	3rd main 2nd cross road	M-30	12-Feb-21	12-Mar-21	150*150 *150	22500	8652	690	30.7	
	1/3	3rd main 2nd cross road	M-30	12-Feb-21	12-Mar-21	150*150 *150	22500	8652	740	32.9	
2	1/1	3rd main 2nd cross road	M-30	12-Feb-21	12-Mar-21	150*150 *150	22500	8463	720	32.0	31.1
	1/2	3rd main 2nd cross road	M-30	12-Feb-21	12-Mar-21	150*150 *150	22500	8652	680	30.2	
	1/3	3rd main 2nd cross road	M-30	12-Feb-21	12-Mar-21	150*150 *150	22500	8465	700	31.1	
3	1/1	3rd Main 3rd cross road	M-30	13-Feb-21	13-Mar-21	150*150 *150	22500	8659	695	30.5	31.6
	1/2	3rd Main 3rd cross road	M-30	13-Feb-21	13-Mar-21	150*150 *150	22500	8421	740	31.6	
	1/3	3rd Main 3rd cross road	M-30	13-Feb-21	13-Mar-21	150*150 *150	22500	8593	720	32.7	
4	1/1	3rd Main 3rd cross road	M-30	13-Feb-21	13-Mar-21	150*150 *150	22500	8496	700	31.1	31.8
	1/2	3rd Main 3rd cross road	M-30	13-Feb-21	13-Mar-21	150*150 *150	22500	8592	725	32.0	
	1/3	3rd Main 3rd cross road	M-30	13-Feb-21	13-Mar-21	150*150 *150	22500	8425	740	32.2	
5	1/1	3rd Main 9th Cross Road Left Side	M-30	15-Feb-21	15-Mar-21	150*150 *150	22500	8519	695	31.6	31.8
	1/2	3rd Main 9th Cross Road Left Side	M-30	15-Feb-21	15-Mar-21	150*150 *150	22500	8550	680	31.8	
	1/3	3rd Main 9th Cross Road Left Side	M-30	15-Feb-21	15-Mar-21	150*150 *150	22500	8427	735	32.0	

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Sl.No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm^2)	Average Compressive strength of 3 Cubes (N/mm^2)
6	1/1	3rd Main 9th Cross Road Left Side	M-30	15-Feb-21	15-Mar-21	150*150 *150	22500	8408	680	32.2	31.9
	1/2	3rd Main 9th Cross Road Left Side	M-30	15-Feb-21	15-Mar-21	150*150 *150	22500	8426	695	32.5	
	1/3	3rd Main 9th Cross Road Left Side	M-30	15-Feb-21	15-Mar-21	150*150 *150	22500	8443	700	31.1	
7	1/1	3rd Main 9th Cross Road Left Side	M-30	16-Feb-21	16-Mar-21	150*150 *150	22500	8543	725	32.2	31.9
	1/2	3rd Main 9th Cross Road Left Side	M-30	16-Feb-21	16-Mar-21	150*150 *150	22500	8492	735	32.7	
	1/3	3rd Main 9th Cross Road Left Side	M-30	16-Feb-21	16-Mar-21	150*150 *150	22500	8529	695	30.9	
8	1/1	3rd Main 4th cross road	M-30	16-Feb-21	16-Mar-21	150*150 *150	22500	8472	735	32.7	32.4
	1/2	3rd Main 4th cross road	M-30	16-Feb-21	16-Mar-21	150*150 *150	22500	8553	740	32.9	
	1/3	3rd Main 4th cross road	M-30	16-Feb-21	16-Mar-21	150*150 *150	22500	8423	710	31.6	
9	1/1	3rd Main 4th cross road	M-30	17-Feb-21	17-Mar-21	150*150 *150	22500	8530	700	31.1	31.5
	1/2	3rd Main 4th cross road	M-30	17-Feb-21	17-Mar-21	150*150 *150	22500	8460	730	32.5	
	1/3	3rd Main 4th cross road	M-30	17-Feb-21	17-Mar-21	150*150 *150	22500	8524	695	30.9	
10	1/1	3rd Main 4th cross road	M-30	17-Feb-21	17-Mar-21	150*150 *150	22500	8550	700	31.1	30.7
	1/2	3rd Main 4th cross road	M-30	17-Feb-21	17-Mar-21	150*150 *150	22500	8479	695	30.9	
	1/3	3rd Main 4th cross road	M-30	17-Feb-21	17-Mar-21	150*150 *150	22500	8520	680	30.2	

emarks:

ıe tested sample is found to be satisfactory as it meets the requirements of the IS 456 : 2000 specification / project requirement with respect to above tests nducted.

The test results pertain to the number of samples as furnished by the customer

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Samples will be disposed after 90 days from the date of issue of test certificate

Gooly Consultancy Services Bangalore

epared By:
ıshpa

Tested By:
Ashwini

Project Manager

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Lab ID : GCS-138-10119-6
Date : 03.03.2021

TEST REPORT OF GRADATION FOR GSB

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 04
Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name of Contractor: M/s Nandi Constructions
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Receipt: 02.03.2021
Sample ID No: 10119-6
Date of Sample Collection: 02.03.2021
Chainage/Location/Land Mark: Ch:0.00 to 250.8m ward 4,Someshwaranagara, sai apartment main road
Date of testing: 02.03.2021
Reference to BIS codes: IS 2386 (Part 1):1963 (RA 2016) Particle Size and Shape Cl.2
Layer: GSB
Oven Dry Wt (gm): 10000

Sl No	Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	As per MORTH 5th Revsion Table 400.1 (Garding V)
1	75	0	0	0.00	100.00	100
2	53	155	155	1.55	98.45	80-100
3	26.5	2315	2470	24.70	75.30	55-90
4	9.5	3986	6456	64.56	35.44	35-65
5	4.75	865	7321	73.21	26.79	25-50
6	2.36	1025	8346	83.46	16.54	10-20
7	0.85	986	9332	93.32	6.68	2-10
8	0.425	656	9988	99.88	0.12	0-5
9	pan	12	10000	100.00	0.00	-

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the MORTH Specification/Project Requirement.

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4. Samples will be disposed after 90 days from the date of issue of test certificate

Gooly Consultancy Services Bangalore

Prepared By: Pushpa D B
Tested By: Ashwini
Project Manager

GOOLY CONSULTANCY SERVICES
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Corporate off : No. 230, Opp. G.R. Lavender Apartments, Sai Enclave Layout, Kothanur Dinne, J.P. Nagar 8th Phase, Bangalore - 560 076.
Contact: +91-80-42277023/24, 9535200024, Email : info@gcsfirm.com, goolyconsultancyservices@yahoo.com, www.gcslabindia.com

Lab ID : GCS-138-10119-7
Date : 05.03.2021

TEST REPORT OF GRADATION FOR WET MIX MACADAM

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 04
Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name of Contractor: M/s Nandi Constructions
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Sample Collection: 04.03.2021

Chainage/Location/ Mark: Ch:0.00 to 111m ward 4, chikkabommasandra 4th A cross road

Date of testing: 04.03.2021
BIS Code: IS 2386 (Part 1):1963 (RA 2016) Particle Size and Shape Cl.2
Layer: WMM

Oven Dry Wt (gm): 10000

Sl No	Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits Vide Table 400.13 as Per MORTH Specification
1	53	0	0	0.00	100	100
2	45	426	426	4.26	95.74	95-100
3	22.4	3125	3551	35.51	64.49	60-80
4	11.2	2362	5913	59.13	40.87	40-60
5	4.75	1456	7369	73.69	26.31	25-40
6	2.36	1023	8392	83.92	16.08	15-30
7	0.600	785	9177	91.77	8.23	8-22
8	0.075	823	10000	100.00	0.00	0-5

Remarks:
The tested sample is found to be satisfactory as it meets the requirements of the MORTH Specification/Project Requirement.

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Gooly Consultancy Services Bangalore

Prepared By: Pushpa D B

Tested By: Ashwini

Project Manager

Lab ID : GCS-138-10119-8
Date : 09.03.2021

TEST REPORT OF BITUMEN CONTENT & GRADATION FOR DENSE BITUMINOUS MACADAM

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 04
Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name Contractor: M/s Nandi Constructions
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Sample Collection: 08.03.2021
Chainage/Location /Land Mark: Ch:0.00 to 250.8m ward 4, sai apartment road
Date of testing: 08.03.2021
Type of Mix: Dense Bituminous Macadam

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
1. Weight of Mixture before Test, gm	500	As per MORTH Specification for DBM Grade II (50-75mm) Bitumen Content 4.5 min VG-30
2. Weight of Mixture after Test, gm	476	
3. Weight of Bitumen Extracted, gm	24	
4. Bitumen content in %	4.8	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: **476** gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500-10
37.5	0	0.00	0.00	100.00	100
26.5	46	9.66	9.66	90.34	90 - 100
19	84	17.65	27.31	72.69	71-95
13.2	78	16.39	43.70	56.30	56-80
4.75	87	18.28	61.97	38.03	38-54
2.36	44	9.24	71.22	28.78	28-42
0.3	74	15.55	86.76	13.24	7-21
0.075	25	5.25	92.02	7.98	2-8

Remarks:
The tested sample is found to be satisfactory as it meets the requirements of theMORTH Specification/Project Requirement.

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3. This report without prior written approval should not be reproduced or published in full or part.
4. Samples will be disposed after 90 days from the date of issue of test certificate

Prepared By: **Pushpa D B**

Tested By: **Ashwini**

Project Manager

Lab ID : GCS-138-10119-8

Date : 11.03.2021

TEST REPORTS FOR BITUMEN CONTENT & GRADATION OF BITUMINOUS CONCRETE

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 04
Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name Contractor: M/s Nandi Constructions
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Sample Collection: 10.03.2021
Chainage/Location /Land Mark: Ch:0.00 to 250.8m ward 4, sai apartment road
Date of testing: 10.03.2021
Type of Mix: Bituminous Concrete

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
1. Weight of Mixture before Test, gm	500	As per MORTH Specification for Grade II Vide Table 500.17 Binder Content 5.4% min
2. Weight of Mixture after Test, gm	472	
3. Weight of Binder Extracted, gm	28	
4. Binder content in %	5.6	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: 472 gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500.17
19	0	0.00	0.00	100.00	100
13.2	39	8.26	8.26	91.74	90 - 100
9.5	55	11.65	19.92	80.08	70-88
4.75	87	18.43	38.35	61.65	53-71
2.36	65	13.77	52.12	47.88	42-58
1.18	65	13.77	65.89	34.11	34-48
0.6	32	6.78	72.67	27.33	26-38
0.3	42	8.90	81.57	18.43	18-28
0.15	30	6.36	87.92	12.08	12-20
0.075	15	3.18	91.10	8.90	4-10

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the MORTH Specification/Project Requirement.

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4. Samples will be disposed after 90 days from the date of issue of test certificate.

Gooly Consultancy Services Bangalore

Prepared By: Pushpa D B

Tested By: Ashwini

Project Manager

Lab ID : GCS-138-10119-1

Date : 17/02/2021

TEST REPORT ON PHYSICAL PROPERTIES OF CEMENT

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike

Address: Yelahanka Division

Package No: Package - 04

Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)

Name Contractor: M/s Nandi Constructions

Name of PMC: M/s Gooly Consultancy services, Bangalore

Date of Receipt: 18.01.2021

Sample ID No: 10119-1

Location: Ch:0.00 to 219m ward 2, East Kamakshamma layout, main road

Sampling : Sample Received from the site and Tested

Sample Identification*: Dalmia PPC 33 grade

Reference to BIS codes:

Test Method:

IS 4031(Part 1):1996(RA 2016) Determination Of Fineness By Dry Sieving

IS 4031 (Part 4):1988 (RA 2019) Determination Of Consistency Of Standard Cement Paste

IS 4031 (Part 5):1988 (RA 2019) Determination Of Initial & Final Setting Time

IS 4031 (Part 6):1988 (RA 2019) Determination Of Compressive Strength

IS 4031 (Part 11):1988 (RA 2019) Determination Of Density

Specification :

IS 1489 (Part - 2) : 1991 Portland pozzolona Cement- Specification (3rd revision)

Condition of sample: Satisfactory

Date of test: 19/01/2021 to 16/02/2021

Sl.No	Physical properties	Results	Units	Requirement as per IS 269: 2015		
				33 Grade	43 Grade	53 Grade
1	Standard Consistency	26	%	Not specified	Not specified	Not specified
2	Initial Setting time	180	minutes	Min 30 minutes	Min 30 minutes	Min 30 minutes
3	Final Setting time	285	minutes	Max 600 minutes	Max 600 minutes	Max 600 minutes
4	Fineness by dry sieving	6.3	%	–	–	–
8	Density	3.15	g/cm^3	–	–	–

Date : 17/02/2021

Sample ID No: 10119-1

Sl.No	Physical properties	Results	Units	Requirement as per IS 269: 2015		
				33 Grade	43 Grade	53 Grade
9	Compressive Strength					
	3 Days	17.0	N/mm^2	Min 16 N/mm^2	Min 23 N/mm^2	Min 27 N/mm^2
	7 Days	24.5	N/mm^2	Min 22 N/mm^2	Min 33 N/mm^2	Min 37 N/mm^2
	28 Days	35.0	N/mm^2	Min 33 N/mm^2, Max 48 N/mm^2	Min 43 N/mm^2, Max 58 N/mm^2	Min 53 N/mm^2

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the IS 1489 (Part - 2) Specification/Project Requirement.

1. The test results pertain to the number of sample Received and Tested
2. Any correction in the report will make this report invalid.
3. This report without prior written approval should not be reproduced or published in full or part.
4. Samples will be disposed after 90 days from the date of issue of test certificate.

Prepared By: Deepthi PT

Tested By: Pushpa D.B

Project Manager

Lab ID : GCS-138-10119-2
Date : 23/01/2021

TEST REPORT ON MECHANICAL PROPERTIES OF COARSE AGGREGATES

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 04
Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name Contractor: M/s Nandi Constructions
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Receipt: 18.01.2021
Sample ID No: 10119-2
Location: Ch:0.00 to 219m ward 2, East Kamakshamma layout, main road
Sample Identification*: 20mm down size Coarse Aggregate
Sampling : Sample Received from the site and Tested
Reference to BIS codes: **Test Method:**
IS 2386 (Part 1) : 1963 (RA 2016) Particle Size And Shape Cl.2
IS 2386 (Part 3) : 1963 (RA 2016) Specific gravity, density, voids, absorption and bulking
IS 2386 (Part 4) : 1963 (RA 2016) Mechanical Properties
Specification:
IS 383 : 2016 Coarse And Fine Aggregate For Concrete
Condition of sample: Satisfactory
Date of test: 19/01/2021 to 23/01/2021

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM COARSE AGGREGATE:

Total weight taken: **5000** **grams**

Sl.No	Sieve Designation	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Requirement as per IS 383: 2016 Table-7 (Cl 6.1 & 6.2)	
						Graded	Single-Sized
1	40 mm	0	0	0	100	100	100
2	20 mm	365	365	7.3	92.7	90-100	85-100
3	10 mm	3025	3390	67.8	32.2	25-55	0-20
4	4.75 mm	1123	4513	90.26	9.74	0-10	0-5
5	Pan	487	5000	100	0	---	---

Date : 23/01/2021

Sample ID No: 10119-2

MECHANICAL PROPERTIES

Sl.No	Tests	Result	Requirements as per IS 383 : 2016
1	Flakiness Index (%)	10.90	Combined flakiness & elongation index shall not exceed 40 % for uncrushed or crushed aggregate
2	Elongation Index (%)	11.60	
3	Bulk density (Loose) (kg/l)	1.46	–
4	Bulk density (Compacted) (kg/l)	1.52	–
5	Specific Gravity	2.60	–
6	Water Absorption (%)	0.20	–
7	Aggregate crushing strength (%)	24	For Aggregates to be used in concrete for wearing surfaces, (such as runways, roads, pavements, tunnel lining carrying water, spillways and stilling basins): Max 30 %

Remarks:-

The tested sample is found to be satisfactory as it meets the requirements of the IS 383 : 2016 Specification/Project Requirement where as the gradation confirms to graded aggregate.

1. The test results pertain to the number of samples Received from the site and Tested
2. Any correction in the report will make this report invalidate
3. This report without prior written approval should not be reproduced or published in full or part.
4. Samples will be disposed after 90 days from the date of issue of test certificate.

Consultancy Services Bangalore

Prepared By: Pushpa D B

Tested By: Vikas K Kaushik

Project Manager

Lab ID : GCS-138-10119-3
Date : 25.01.2021

TEST REPORT ON PHYSICAL PROPERTIES OF FINE AGGREGATE

Name of Client: Bruhat Bangalore Mahanagara Palike

Address: Yelahanka Division

Package No: Package - 04

Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)

Name Contractor: M/s Nandi Constructions

Name of PMC: M/s Gooly Consultancy services, Bangalore

Date of Receipt: 18.01.2021

Sample ID No: 10119-3

Location: Ch:0.00 to 219m ward 2, East Kamakshamma layout, main road

Sampling : Sample Received from the site and Tested

Sample Identification*: M-Sand

Reference to BIS codes: **Test Method:**

IS 2386 (Part 1) : 1963 (RA 2016) Particle Size And Shape Cl.2

IS 2386 (Part 3) : 1963 (RA 2016) Specific gravity, density, voids, absorption and bulking

IS 2386 (Part 4) :1963 (RA 2016) Mechanical Properties

Specification:

IS 383 : 2016 Coarse and fine aggregate for concrete

Condition of sample: Satisfactory

Date of test: 19/01/2021 to 23/01/2021

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF FINE AGGREGATE:

Total weight taken: 1000 grams

SL.No	Sieve Designation	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383 : 2016 Table-9, (Cl-6.3)				Remarks
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV	
1	10 mm	0	0	0	100	100	100	100	100	The tested Sample confirms to Grading Zone- II
2	4.75 mm	0	0	0	100	90-100	90-100	90-100	95-100	
3	2.36 mm	63	63	6.3	93.7	60-95	75-100	85-100	95-100	
4	1.18 mm	316	379	37.9	62.1	30-70	55-90	75-100	90-100	
5	600 micron	238	617	61.7	38.3	15-34	35-59	60-79	80-100	
6	300 micron	298	915	91.5	8.5	5-20	8-30	12-40	15-50	
7	150 micron	54	969	96.9	3.1	0-10	0-10	0-10	0-15	
8	Pan	31	1000	100	0	---	---	---	---	

Testing of Construction Material - Mechanical & Chemical, Soil & Non Destructive Testing Services, Project Management Consultancy, Third Party Quality Assurance, Detailed Project Report, Rehabilitation, Road Safety Review & Structural design

Date : 25.01.2021

Sample ID No: 10119-3

PHYSICAL PROPERTIES

Sl.No	Tests	Result	Requirements as per IS 383 : 2016 Table-3, (Cl-5.7)
1	Bulk density (compacted)	1.56	–
2	Bulk density (Loose)	1.51	–
3	Specific Gravity	2.6	2.1 to 3.2
4	Water Absorption (%)	1	5% Max
5	Finer tham 75 micron	8	10% Max

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the IS 383 : 2016 Specification/Project Requirement with respect to above tests conducted

1. The test results pertain to the number of Sample Received from the site and Tested
2. Any correction in the report will make this report invalid.
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4. Samples will be disposed after 90 days from the date of issue of test certificate.

Prepared By: Pushpa D B

Tested By: Sri Charan

Gooly Consultancy Services Bangalore

Project Manager

Lab ID : GCS-138-10119-4

Date : 25.01.2021

TEST REPORT ON MECHANICAL PROPERTIES OF REINFORCEMENT STEEL

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike

Address: Yelahanka Division

Package No: Package - 04

Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)

Name Contractor: M/s Nandi Constructions

Name of PMC: M/s Gooly Consultancy services, Bangalore

Date of Receipt: 18.01.2021

Location: Ch:0.00 to 219m ward 2, East Kamakshamma layout, main road

Sampling : Sample Received from the site and Tested

Reference to BIS codes: **Test Method:**

IS 1608 (Part 1) : 2018, Metallic Materials, Tensile Testing, Method of Test at Room Temperature

IS 1786 : 2008 (RA 2018) High strength deformed steel bars and wires for concrete reinforcement - Bend & Rebend Test

Specification:

IS 1786 : 2008 (RA 2018) High strength deformed steel bars and wires for concrete reinforcement

Condition of sample: Satisfactory

Date of test: 19/01/2021 to 23/01/2021

Sl. No	Sample Identification	Sample ID No	Nominal size (dia in mm)	Mass per meter (kg/meter)	TENSILE STRENGTH				Bend Test	Re Bend Test
					0.20 % proof stress/ yield stress (N/mm^2)	Tensile strength (N/mm^2)	TS/YS ratio	Elongation percent on gauge length		
1	RD TMT Fe 550	10119-4/1a	08	0.395	705	778	1.10	25.0	–	–
	RD TMT Fe 550	10119-4/1b	08	0.396	–	–	–	–	No Rupture or Crack Visible	–
	RD TMT Fe 550	10119-4/1c	08	0.394	–	–	–	–	–	No Rupture or Crack Visible

Date : 25.01.2021

Sl. No	Sample Identification	Sample ID No	Nominal size (dia in mm)	Mass per meter (kg/meter)	TENSILE STRENGTH				Bend Test	Re Bend Test
					0.20 % proof stress/ yield stress (N/mm^2)	Tensile strength (N/mm^2)	TS/YS ratio	Elongation percent on gauge length		
2	RD TMT Fe 550	10119-4/2a	10	0.564	565	662	1.17	24.0	–	–
	RD TMT Fe 550	10119-4/2b	10	0.565	–	–	–	–	No Rupture or Crack Visible	–
	RD TMT Fe 550	10119-4/2c	10	0.566	–	–	–	–	–	No Rupture or Crack Visible

Sl. No	Sample Identification	Sample ID No	Nominal size (dia in mm)	Mass per meter (kg/meter)	TENSILE STRENGTH				Bend Test	Re Bend Test
					0.20 % proof stress/ yield stress (N/mm^2)	Tensile strength (N/mm^2)	TS/YS ratio	Elongation percent on gauge length		
3	RD TMT Fe 550	10119-4/3a	12	0.885	600	658	1.09	25.0	–	–
	RD TMT Fe 550	10119-4/3b	12	0.886	–	–	–	–	No Rupture or Crack Visible	–
	RD TMT Fe 550	10119-4/3c	12	0.888	–	–	–	–	–	No Rupture or Crack Visible

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the IS 1786 : 2008 (RA 2018) specification/ project requirement with respect to above tests conducted.

1. The test results pertain to the number of samples Received from the site and Tested
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Gooly Consultancy Services Bangalore

Prepared By: Pushpa D B

Tested By: Sree Charan S

Project Manager

GOOLY CONSULTANCY SERVICES
ISO 9001 : 2015 Certified & NABL Accreditated Laboratory as per ISO/IEC - 17025 - 2017
Corporate off : No. 230, Opp. G.R. Lavender Apartments, Sai Enclave Layout, Kothanur Dinne, J.P. Nagar 8th Phase, Bangalore - 560 076.
Contact: +91-80-42277023/24, 9535200024, 8431862730, Email : info@goolyconsultancy.com, goolylab@gmail.com, Website : www.goolyconsultancy.com

Lab ID : GCS-138-10119-5

Date : 01.03.2021

TEST REPORT ON CEMENT CONCRETE CUBES

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike

Address: Yelahanka Division

Package No: Package - 04

Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)

Name of Contractor: M/s Nandi Constructions

Name of PMC: M/s Gooly Consultancy services, Bangalore

Sample ID No: 10119-5

Sample Identification*: C C Cube / 150mmx150mmx150mm / M - 20 / 28 days Compressive Strength

Reference to BIS codes:

Test Method:

IS 516 : 1959 (RA 2018) Methods Of Tests For Strength Of Concrete Cl.5

Specification:

IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice

Condition of sample: Satisfactory

Compressive strength : 20N/mm^2 as per IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice

Sl.No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm^2)	Average Compressive strength of 3 Cubes (N/mm^2)
Ward 2, East Kamakshamma layout											
1	1/1	3rd cross road	M-20	18-Jan-21	15-Feb-21	150*150 *150	22500	8562	510	22.7	22.1
	1/2	3rd cross road	M-20	18-Jan-21	15-Feb-21	150*150 *150	22500	8527	495	22.0	
	1/3	3rd cross road	M-20	18-Jan-21	15-Feb-21	150*150 *150	22500	8591	485	21.6	
2	1/1	4th cross road	M-20	18-Jan-21	15-Feb-21	150*150 *150	22500	8425	495	22.0	21.4
	1/2	4th cross road	M-20	18-Jan-21	15-Feb-21	150*150 *150	22500	8463	465	20.7	
	1/3	4th cross road	M-20	18-Jan-21	15-Feb-21	150*150 *150	22500	8485	485	21.6	
3	1/1	5th cross road	M-20	19-Jan-21	16-Feb-21	150*150 *150	22500	8401	475	21.1	21.2
	1/2	5th cross road	M-20	19-Jan-21	16-Feb-21	150*150 *150	22500	8461	485	21.6	
	1/3	5th cross road	M-20	19-Jan-21	16-Feb-21	150*150 *150	22500	8497	470	20.9	
4	1/1	2nd main road	M-20	19-Jan-21	16-Feb-21	150*150 *150	22500	8547	455	20.2	21.0
	1/2	2nd main road	M-20	19-Jan-21	16-Feb-21	150*150 *150	22500	8526	485	21.6	
	1/3	2nd main road	M-20	19-Jan-21	16-Feb-21	150*150 *150	22500	8533	480	21.3	
5	1/1	3rd cross towards main road	M-20	20-Jan-21	17-Feb-21	150*150 *150	22500	8549	455	20.2	20.8
	1/2	3rd cross towards main road	M-20	20-Jan-21	17-Feb-21	150*150 *150	22500	8411	465	20.7	
	1/3	3rd cross towards main road	M-20	20-Jan-21	17-Feb-21	150*150 *150	22500	8566	485	21.6	

Sl.No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm^2)	Average Compressive strength of 3 Cubes (N/mm^2)
6	1/1	3rd cross towards main road	M-20	20-Jan-21	17-Feb-21	150*150 *150	22500	8449	455	20.2	20.8
	1/2	3rd cross towards main road	M-20	20-Jan-21	17-Feb-21	150*150 *150	22500	8421	465	20.7	
	1/3	3rd cross towards main road	M-20	20-Jan-21	17-Feb-21	150*150 *150	22500	8566	485	21.6	
7	1/1	Railway Station-Kamakshamma	M-20	22-Jan-21	19-Feb-21	150*150 *150	22500	8471	465	20.7	21.3
	1/2	Railway Station-Kamakshamma	M-20	22-Jan-21	19-Feb-21	150*150 *150	22500	8522	495	22.0	
	1/3	Railway Station-Kamakshamma	M-20	22-Jan-21	19-Feb-21	150*150 *150	22500	8569	475	21.1	
8	1/1	Railway Station-Kamakshamma	M-20	22-Jan-21	19-Feb-21	150*150 *150	22500	8547	485	21.6	20.8
	1/2	Railway Station-Kamakshamma	M-20	22-Jan-21	19-Feb-21	150*150 *150	22500	8526	455	20.2	
	1/3	Railway Station-Kamakshamma	M-20	22-Jan-21	19-Feb-21	150*150 *150	22500	8539	465	20.7	
9	1/1	East Kamakshamma	M-20	23-Jan-21	20-Feb-21	150*150 *150	22500	8456	455	20.2	20.7
	1/2	East Kamakshamma	M-20	23-Jan-21	20-Feb-21	150*150 *150	22500	8527	465	20.7	
	1/3	East Kamakshamma	M-20	23-Jan-21	20-Feb-21	150*150 *150	22500	8512	480	21.3	
10	1/1	East Kamakshamma	M-20	23-Jan-21	20-Feb-21	150*150 *150	22500	8426	455	20.2	20.6
	1/2	East Kamakshamma	M-20	23-Jan-21	20-Feb-21	150*150 *150	22500	8537	460	20.5	
	1/3	East Kamakshamma	M-20	23-Jan-21	20-Feb-21	150*150 *150	22500	8529	475	21.1	
11	1/1	East Kamakshamma	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8421	475	21.1	20.9
	1/2	East Kamakshamma	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8535	468	20.8	
	1/3	East Kamakshamma	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8530	468	20.8	
12	1/1	East Kamakshamma	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8547	450	20.0	20.4
	1/2	East Kamakshamma	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8526	468	20.8	
	1/3	East Kamakshamma	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8539	460	20.5	
13	1/1	2nd main road	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8466	455	20.2	20.7
	1/2	2nd main road	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8527	465	20.7	
	1/3	2nd main road	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8512	480	21.3	
14	1/1	2nd main road	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8462	455	20.2	20.6
	1/2	2nd main road	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8435	460	20.5	
	1/3	2nd main road	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8529	475	21.1	

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Contact: +91-80-42277023/24, 9535200024, 8431662730, Email : info@goolyconsultancy.com, goolylab@gmail.com, Website : www.goolyconsultancy.com

Sl.No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm^2)	Average Compressive strength of 3 Cubes (N/mm^2)
15	1/1	2nd Main Road Connection LHS	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8421	460	20.5	20.3
	1/2	2nd Main Road Connection LHS	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8535	461	20.5	
	1/3	2nd Main Road Connection LHS	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8530	450	20.0	
16	1/1	2nd Main Road Connection LHS	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8466	455	20.2	20.6
	1/2	2nd Main Road Connection LHS	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8537	460	20.5	
	1/3	2nd Main Road Connection LHS	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8529	475	21.1	
17	1/1	2nd Main Road Connection LHS	M-20	30-Jan-21	27-Feb-21	150*150 *150	22500	8421	460	20.5	20.3
	1/2	2nd Main Road Connection LHS	M-20	30-Jan-21	27-Feb-21	150*150 *150	22500	8535	461	20.5	
	1/3	2nd Main Road Connection LHS	M-20	30-Jan-21	27-Feb-21	150*150 *150	22500	8530	450	20.0	

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the IS 456 : 2000 specification / project requirement with respect to above tests conducted

1. The test results pertain to the number of samples as furnished by the customer
2. Any correction in the report will make this report invalid.
3. This report without prior written approval should not be reproduced or published in full or part.
4. Samples will be disposed after 90 days from the date of issue of test certificate

Gooly Consultancy Services Bangalore

Prepared By:
Pushpa D B

Tested By:
Ashwini

Project Manager

Lab ID : GCS-138-10119-1

Date : 17/02/2021

TEST REPORT ON PHYSICAL PROPERTIES OF CEMENT

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike

Address: Yelahanka Division

Package No: Package - 04

Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)

Name Contractor: M/s Nandi Constructions

Name of PMC: M/s Gooly Consultancy services, Bangalore

Date of Receipt: 18.01.2021

Sample ID No: 10119-1

Location: Ch:0.00 to 132m ward 1, Maruthinagara,3rd main 5th cross

Sampling : Sample Received from the site and Tested

Sample Identification*: Dalmia PPC 33grade

Reference to BIS codes:

Test Method:

IS 4031(Part 1):1996(RA 2016) Determination Of Fineness By Dry Sieving

IS 4031 (Part 4):1988 (RA 2019) Determination Of Consistency Of Standard Cement Paste

IS 4031 (Part 5):1988 (RA 2019) Determination Of Initial & Final Setting Time

IS 4031 (Part 6):1988 (RA 2019) Determination Of Compressive Strength

IS 4031 (Part 11):1988 (RA 2019) Determination Of Density

Specification :

IS 1489 (Part - 2) : 1991 Portland pozzolona Cement- Specification (3rd revision)

Condition of sample: Satisfactory

Date of test: 19/01/2021 to 16/02/2021

Sl.No	Physical properties	Results	Units	Requirement as per IS 269: 2015		
				33 Grade	43 Grade	53 Grade
1	Standard Consistency	26	%	Not specified	Not specified	Not specified
2	Initial Setting time	175	minutes	Min 30 minutes	Min 30 minutes	Min 30 minutes
3	Final Setting time	300	minutes	Max 600 minutes	Max 600 minutes	Max 600 minutes
4	Fineness by dry sieving	6.2	%	–	–	–
8	Density	3.14	g/cm^3	–	–	–

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Contact: +91-80-42277023/24, 9535200024, 8431667730, Email : info@goolyconsultancy.com, goolylab@gmail.com, Website : www.goolyconsultancy.com

Date : 17/02/2021

Sample ID No: 10119-1

Sl.No	Physical properties	Results	Units	Requirement as per IS 269: 2015		
				33 Grade	43 Grade	53 Grade
9	Compressive Strength					
	3 Days	16.5	N/mm^2	Min 16 N/mm^2	Min 23 N/mm^2	Min 27 N/mm^2
	7 Days	24.0	N/mm^2	Min 22 N/mm^2	Min 33 N/mm^2	Min 37 N/mm^2
	28 Days	34.5	N/mm^2	Min 33 N/mm^2, Max 48 N/mm^2	Min 43 N/mm^2, Max 58 N/mm^2	Min 53 N/mm^2

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the IS 1489 (Part - 2) Specification/Project Requirement.

1. The test results pertain to the number of sample Received and Tested
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Consultancy Services Bangalore

Prepared By:
Deepthi PT

Tested By:
Pushpa D.B

Project Manager

Lab ID : GCS-138-10119-3

Date : 25.01.2021

TEST REPORT ON PHYSICAL PROPERTIES OF FINE AGGREGATE

Name of Client: Bruhat Bangalore Mahanagara Palike

Address: Yelahanka Division

Package No: Package - 04

Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)

Name Contractor: M/s Nandi Constructions

Name of PMC: M/s Gooly Consultancy services, Bangalore

Date of Receipt: 18.01.2021

Sample ID No: 10119-3

Location: Ch:0.00 to 132m ward 1, Maruthinagara,3rd main 5th cross

Sampling : Sample Received from the site and Tested

Sample Identification*: M-Sand

Reference to BIS codes: **Test Method**:

IS 2386 (Part 1) : 1963 (RA 2016) Particle Size And Shape Cl.2

IS 2386 (Part 3) : 1963 (RA 2016) Specific gravity, density, voids, absorption and bulking

IS 2386 (Part 4) :1963 (RA 2016) Mechanical Properties

Specification:

IS 383 : 2016 Coarse and fine aggregate for concrete

Condition of sample: Satisfactory

Date of test: 19/01/2021 to 23/01/2021

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF FINE AGGREGATE:

Total weight taken: 1000 grams

SL.No	Sieve Designation	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383 : 2016 Table-9, (Cl-6.3)				Remarks
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV	
1	10 mm	0	0	0	100	100	100	100	100	The tested Sample confirms to Grading Zone- II
2	4.75 mm	0	0	0	100	90-100	90-100	90-100	95-100	
3	2.36 mm	66	66	6.6	93.4	60-95	75-100	85-100	95-100	
4	1.18 mm	313	379	37.9	62.1	30-70	55-90	75-100	90-100	
5	600 micron	243	622	62.2	37.8	15-34	35-59	60-79	80-100	
6	300 micron	292	914	91.4	8.6	5-20	8-30	12-40	15-50	
7	150 micron	53	967	96.7	3.3	0-10	0-10	0-10	0-15	
8	Pan	33	1000	100	0	---	---	---	---	

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Contact: +91-80-42277023/24, 9535200024, 8431662730, Email : info@goolyconsultancy.com, goolylab@gmail.com, Website : www.goolyconsultancy.com

Lab ID : GCS-138-10119-4
Date : 25.01.2021

TEST REPORT ON MECHANICAL PROPERTIES OF REINFORCEMENT STEEL

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 04
Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)

Name Contractor: M/s Nandi Constructions
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Receipt: 18.01.2021
Location: Ch:0.00 to 132m ward 1, Maruthinagara,3rd main 5th cross
Sampling : Sample Received from the site and Tested
Reference to BIS codes: **Test Method:**
IS 1608 (Part 1) : 2018, Metallic Materials, Tensile Testing, Method of Test at Room Temperature
IS 1786 : 2008 (RA 2018) High strength deformed steel bars and wires for concrete reinforcement - Bend & Rebend Test
Specification:
IS 1786 : 2008 (RA 2018) High strength deformed steel bars and wires for concrete reinforcement

Condition of sample: Satisfactory
Date of test: 19/01/2021 to 23/01/2021

Sl. No	Sample Identification	Sample ID No	Nominal size (dia in mm)	Mass per meter (kg/meter)	TENSILE STRENGTH				Bend Test	Re Bend Test
					0.20 % proof stress/ yield stress (N/mm^2)	Tensile strength (N/mm^2)	TS/YS ratio	Elongation percent on gauge length		
1	RD TMT Fe 550	10119-4/1a	08	0.395	705	775	1.09	24.0	–	–
	RD TMT Fe 550	10119-4/1b	08	0.394	–	–	–	–	No Rupture or Crack Visible	–
	RD TMT Fe 550	10119-4/1c	08	0.396	–	–	–	–	–	No Rupture or Crack Visible

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Contact: +91-80-41277023/24, 9535200024, 8431662730, Email : info@goolyconsultancy.com, goolyhk@gmail.com, Website : www.goolyconsultancy.com

Date : 25.01.2021

Sl. No	Sample Identification	Sample ID No	Nominal size (dia in mm)	Mass per meter (kg/meter)	TENSILE STRENGTH				Bend Test	Re Bend Test
					0.20 % proof stress/ yield stress (N/mm^2)	Tensile strength (N/mm^2)	TS/YS ratio	Elongation percent on gauge length		
2	RD TMT Fe 550	10119-4/2a	10	0.608	571	663	1.16	24.0	–	–
	RD TMT Fe 550	10119-4/2b	10	0.615	–	–	–	–	No Rupture or Crack Visible	–
	RD TMT Fe 550	10119-4/2c	10	0.614	–	–	–	–	–	No Rupture or Crack Visible

Sl. No	Sample Identification	Sample ID No	Nominal size (dia in mm)	Mass per meter (kg/meter)	TENSILE STRENGTH				Bend Test	Re Bend Test
					0.20 % proof stress/ yield stress (N/mm^2)	Tensile strength (N/mm^2)	TS/YS ratio	Elongation percent on gauge length		
3	RD TMT Fe 550	10119-4/3a	12	0.885	605	672	1.11	25.0	–	–
	RD TMT Fe 550	10119-4/3b	12	0.886	–	–	–	–	No Rupture or Crack Visible	–
	RD TMT Fe 550	10119-4/3c	12	0.889	–	–	–	–	–	No Rupture or Crack Visible

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the IS 1786 : 2008 (RA 2018) specification/ project requirement with respect to above tests conducted.

1. The test results pertain to the number of samples Received from the site and Tested
2. Any correction in the report will make this report invalid.
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4. Samples will be disposed after 90 days from the date of issue of test certificate.

Prepared By:
Pushpa D B

Tested By:
Sree Charan S

Gooly Consultancy Services Bangalore

Project Manager

Lab ID : GCS-138-10119-2

Date : 23/01/2021

TEST REPORT ON MECHANICAL PROPERTIES OF COARSE AGGREGATES

Name of Client:	Executive Engineer Bruhat Bangalore Mahanagara Palike
Address:	Yelahanka Division
Package No:	Package - 04
Name of Work:	Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name Contractor:	M/s Nandi Constructions
Name of PMC:	M/s Gooly Consultancy services, Bangalore
Date of Receipt:	18.01.2021
Sample ID No:	10119-2
Location:	Ch:0.00 to 132m ward 1, Maruthinagara,3rd main 5th cross
Sample Identification*:	20mm down size Coarse Aggregate
Sampling :	Sample Received from the site and Tested
Reference to BIS codes:	**Test Method:** IS 2386 (Part 1) : 1963 (RA 2016) Particle Size And Shape Cl.2 IS 2386 (Part 3) : 1963 (RA 2016) Specific gravity, density, voids, absorption and bulking IS 2386 (Part 4) : 1963 (RA 2016) Mechanical Properties **Specification:** IS 383 : 2016 Coarse And Fine Aggregate For Concrete
Condition of sample:	Satisfactory
Date of test:	19/01/2021 to 23/01/2021

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM COARSE AGGREGATE:

Total weight taken: 5000 grams

Sl.No	Sieve Designation	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Requirement as per IS 383: 2016 Table-7 (Cl 6.1 & 6.2)	
						Graded	Single-Sized
1	40 mm	0	0	0	100	100	100
2	20 mm	456	456	9.12	90.88	90-100	85-100
3	10 mm	3265	3721	74.42	25.58	25-55	0-20
4	4.75 mm	1235	4956	99.12	0.88	0-10	0-5
5	Pan	44	5000	100	0	---	---

Date : 23/01/2021

Sample ID No: 10119-2

MECHANICAL PROPERTIES

Sl.No	Tests	Result	Requirements as per IS 383 : 2016
1	Flakiness Index (%)	10.60	Combined flakiness & elongation index shall not exceed 40 % for uncrushed or crushed aggregate
2	Elongation Index (%)	11.80	
3	Bulk density (Loose) (kg/l)	1.45	–
4	Bulk density (Compacted) (kg/l)	1.55	–
5	Specific Gravity	2.65	–
6	Water Absorption (%)	0.20	–
7	Aggregate crushing strength (%)	25	For Aggregates to be used in concrete for wearing surfaces, (such as runways, roads, pavements, tunnel lining carrying water, spillways and stilling basins): Max 30 %

Remarks:-

The tested sample is found to be satisfactory as it meets the requirements of the IS 383 : 2016 Specification/Project Requirement where as the gradation confirms to graded aggregate.

1. The test results pertain to the number of samples Received from the site and Tested
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4. Samples will be disposed after 90 days from the date of issue of test certificate.

Gooly Consultancy Services Bangalore

Prepared By: Pushpa D B

Tested By: Vikas K Kaushik

Project Manager

Lab ID : GCS-138-10119-5
Date : 27.07.2021

TEST REPORT ON CEMENT CONCRETE CUBES

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 04
Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name of Contractor: M/s Nandi Constructions
Name of PMC: M/s Gooly Consultancy services, Bangalore
Sample ID No: 10119-5
Sample Identification*: C C Cube / 150mmx150mmx150mm / M - 20 / 28 days Compressive Strength

Reference to BIS codes:
Test Method:
IS 516 : 1959 (RA 2018) Methods Of Tests For Strength Of Concrete Cl.5
Specification:
IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice

Condition of sample: Satisfactory

Compressive strength : 20N/mm^2 as per IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice

Sl.No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm^2)	Average Compressive strength of 3 Cubes (N/mm^2)
Ward 1, Maruthinagara,											
1	1/1	Raithara Santhe 6th Cross	M-20	18-Jan-21	15-Feb-21	150*150 *150	22500	8562	465	20.7	21.1
	1/2	Raithara Santhe 6th Cross	M-20	18-Jan-21	15-Feb-21	150*150 *150	22500	8527	475	21.1	
	1/3	Raithara Santhe 6th Cross	M-20	18-Jan-21	15-Feb-21	150*150 *150	22500	8591	485	21.6	
2	1/1	Raithara Santhe 7th Cross	M-20	20-Jan-21	17-Feb-21	150*150 *150	22500	8425	495	22.0	21.4
	1/2	Raithara Santhe 7th Cross	M-20	20-Jan-21	17-Feb-21	150*150 *150	22500	8463	465	20.7	
	1/3	Raithara Santhe 7th Cross	M-20	20-Jan-21	17-Feb-21	150*150 *150	22500	8485	485	21.6	
3	1/1	3rd main 5th cross	M-20	22-Jan-21	19-Feb-21	150*150 *150	22500	8401	475	21.1	21.2
	1/2	3rd main 5th cross	M-20	22-Jan-21	19-Feb-21	150*150 *150	22500	8461	485	21.6	
	1/3	3rd main 5th cross	M-20	22-Jan-21	19-Feb-21	150*150 *150	22500	8497	470	20.9	
4	1/1	3rd main 5th cross	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8547	455	20.2	21.0
	1/2	3rd main 5th cross	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8526	485	21.6	
	1/3	3rd main 5th cross	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8533	480	21.3	
5	1/1	3rd main 10th cross	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8549	455	20.2	20.8
	1/2	3rd main 10th cross	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8411	465	20.7	
	1/3	3rd main 10th cross	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8566	485	21.6	

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Contact : +91-80-42237823/24, 9535200024, 8431642739. Email : info@goolyconsultancy.com, goolylab@gmail.com, Website : www.goolyconsultancy.com

Date : 23/01/2021

Sample ID No: 10119-2

MECHANICAL PROPERTIES

Sl.No	Tests	Result	Requirements as per IS 383 : 2016
1	Flakiness Index (%)	10.60	Combined flakiness & elongation index shall not exceed 40 % for uncrushed or crushed aggregate
2	Elongation Index (%)	11.80	
3	Bulk density (Loose) (kg/l)	1.45	–
4	Bulk density (Compacted) (kg/l)	1.55	–
5	Specific Gravity	2.65	–
6	Water Absorption (%)	0.20	–
7	Aggregate crushing strength (%)	25	For Aggregates to be used in concrete for wearing surfaces, (such as runways, roads, pavements, tunnel lining carrying water, spillways and stilling basins): Max 30 %

Remarks:-

The tested sample is found to be satisfactory as it meets the requirements of the IS 383 : 2016 Specification/Project Requirement where as the gradation confirms to graded aggregate.

1. The test results pertain to the number of samples Received from the site and Tested
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4. Samples will be disposed after 90 days from the date of issue of test certificate.

Gooly Consultancy Services Bangalore

Prepared By: **Pushpa D B**

Tested By: **Vikas K Kaushik**

Project Manager

Testing of Construction Material - Mechanical & Chemical, Soil & Non Destructive Testing Services, Project Management Consultancy, Third Party Quality Assurance, Detailed Project Report, Rehabilitation, Road Safety Review & Structural design

Lab ID : GCS-138-10119-5

Date : 27.07.2021

TEST REPORT ON CEMENT CONCRETE CUBES

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike

Address: Yelahanka Division

Package No: Package - 04

Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)

Name of Contractor: M/s Nandi Constructions

Name of PMC: M/s Gooly Consultancy services, Bangalore

Sample ID No: 10119-5

Sample Identification*: C C Cube / 150mmx150mmx150mm / M - 20 / 28 days Compressive Strength

Reference to BIS codes:

Test Method:

IS 516 : 1959 (RA 2018) Methods Of Tests For Strength Of Concrete Cl.5

Specification:

IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice

Condition of sample: Satisfactory

Compressive strength : 20N/mm^2 as per IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice

Sl.No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm^2)	Average Compressive strength of 3 Cubes (N/mm^2)
Ward 1, Maruthinagara,											
1	1/1	Raithara Santhe 6th Cross	M-20	18-Jan-21	15-Feb-21	150*150 *150	22500	8562	465	20.7	21.1
	1/2	Raithara Santhe 6th Cross	M-20	18-Jan-21	15-Feb-21	150*150 *150	22500	8527	475	21.1	
	1/3	Raithara Santhe 6th Cross	M-20	18-Jan-21	15-Feb-21	150*150 *150	22500	8591	485	21.6	
2	1/1	Raithara Santhe 7th Cross	M-20	20-Jan-21	17-Feb-21	150*150 *150	22500	8425	495	22.0	21.4
	1/2	Raithara Santhe 7th Cross	M-20	20-Jan-21	17-Feb-21	150*150 *150	22500	8463	465	20.7	
	1/3	Raithara Santhe 7th Cross	M-20	20-Jan-21	17-Feb-21	150*150 *150	22500	8485	485	21.6	
3	1/1	3rd main 5th cross	M-20	22-Jan-21	19-Feb-21	150*150 *150	22500	8401	475	21.1	21.2
	1/2	3rd main 5th cross	M-20	22-Jan-21	19-Feb-21	150*150 *150	22500	8461	485	21.6	
	1/3	3rd main 5th cross	M-20	22-Jan-21	19-Feb-21	150*150 *150	22500	8497	470	20.9	
4	1/1	3rd main 5th cross	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8547	455	20.2	21.0
	1/2	3rd main 5th cross	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8526	485	21.6	
	1/3	3rd main 5th cross	M-20	25-Jan-21	22-Feb-21	150*150 *150	22500	8533	480	21.3	
5	1/1	3rd main 10th cross	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8549	455	20.2	20.8
	1/2	3rd main 10th cross	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8411	465	20.7	
	1/3	3rd main 10th cross	M-20	27-Jan-21	24-Feb-21	150*150 *150	22500	8566	485	21.6	

Sl.No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm^2)	Average Compressive strength of 3 Cubes (N/mm^2)
6	1/1	3rd main 10th cross	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8471	465	20.7	21.3
	1/2	3rd main 10th cross	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8522	495	22.0	
	1/3	3rd main 10th cross	M-20	29-Jan-21	26-Feb-21	150*150 *150	22500	8569	475	21.1	

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the IS 456 : 2000 specification / project requirement with respect to above tests conduct

1. The test results pertain to the number of samples as furnished by the customer
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4. Samples will be disposed after 90 days from the date of issue of test certificate

Goolly Consultancy Services Bangalore

Prepared By:
Pushpa D B

Tested By:
Ashwini

Project Manager

GOOLY CONSULTANCY SERVICES
ISO 9001 : 2015 Certified & NABL Accreditated Laboratory as per ISO/IEC - 17025 - 2017
Corporate off : No. 230, Opp. G.K. Lavender Apartments, Sai Enclave Layout, Kothanur Dinne, J.P. Nagar 8th Phase, Bangalore - 560 076.
Contact : +91-80-42277023/24, 9535200024, 8431662730, Email : info@goolyconsultancy.com, goolylab@gmail.com, Website : www.goolyconsultancy.com

Lab ID : GCS-138-10119-8

Date : 10.03.2021

TEST REPORT OF BITUMEN CONTENT & GRADATION FOR DENSE BITUMINOUS MACADAM

Name of Client: Bruhat Bangalore Mahanagara Palike

Address: Yelahanka Division

Package No: Package - 01

Name of Work: Improvements to roads, drains and other developmental works in ward no- 02 & 03 under road development head in Chief Minister Nava Nagarothan grants of Yelahanka division. (Package -01)

Name Contractor: M/s Sathya Constructions

Name of PMC: M/s Gooly Consultancy services, Bangalore

Date of Sample Collection: 09.03.2021

Chainage/Location /Land Mark: Ch:0.00 to 500m ward 1, Maruthinagar3rd main road

Date of testing: 09.03.2021

Type of Mix: Dense Bituminous Macadam

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
1. Weight of Mixture before Test, gm	500	As per MORTH Specification for DBM Grade II (50-75mm) Bitumen Content 4.5 min VG-30
2. Weight of Mixture after Test, gm	477	
3. Weight of Bitumen Extracted, gm	23	
4. Bitumen content in %	4.6	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: **477** gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500-10
37.5	0	0.00	0.00	100.00	100
26.5	38	7.97	7.97	92.03	90 - 100
19	86	18.03	26.00	74.00	71-95
13.2	78	16.35	42.35	57.65	56-80
4.75	88	18.45	60.80	39.20	38-54
2.36	47	9.85	70.65	29.35	28-42
0.3	66	13.84	84.49	15.51	7-21
0.075	42	8.81	93.29	6.71	2-8

Remarks:
The tested sample is found to be satisfactory as it meets the requirements of theMORTH Specification/Project Requirement.

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Gooly Consultancy Services Bangalore

Prepared By: Pushpa D B

Tested By: Ashwini

Project Manager

Lab ID : GCS-138-10119-8

Date : 12.03.2021

TEST REPORTS FOR BITUMEN CONTENT & GRADATION OF BITUMINOUS CONCRETE

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 04
Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name Contractor: M/s Nandi Constructions
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Sample Collection: 11.03.2021
Chainage/Location /Land Mark: Ch:0.00 to 500m ward 1, Maruthinagar 3rd main road
Date of testing: 11.03.2021
Type of Mix: Bituminous Concrete

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
1. Weight of Mixture before Test, gm	500	As per MORTH Specification for Grade II Vide Table 500.17 Binder Content 5.4% min
2. Weight of Mixture after Test, gm	473	
3. Weight of Binder Extracted, gm	27	
4. Binder content in %	5.4	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: 473 gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500.17
19	0	0.00	0.00	100.00	100
13.2	32	6.77	6.77	93.23	90 - 100
9.5	56	11.84	18.60	81.40	70-88
4.75	68	14.38	32.98	67.02	53-71
2.36	74	15.64	48.63	51.37	42-58
1.18	55	11.63	60.25	39.75	34-48
0.6	55	11.63	71.88	28.12	26-38
0.3	45	9.51	81.40	18.60	18-28
0.15	36	7.61	89.01	10.99	12-20
0.075	12	2.54	91.54	8.46	4-10

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the MORTH Specification/Project Requirement.

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Gooly Consultancy Services Bangalore

Prepared By: Pushpa D B

Tested By: Ashwini

Project Manager

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Lab ID : GCS-138-10119-8

Date : 13.02.2021

TEST REPORTS FOR BITUMEN CONTENT & GRADATION OF BITUMINOUS CONCRETE

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 04
Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name Contractor: M/s Nandi Constructions
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Sample Collection: 12.03.2021
Chainage/Location /Land Mark: 3rd Main Road, Maruthinagar ward 01
Date of testing: 12.03.2021
Type of Mix: Bituminous Concrete

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
1. Weight of Mixture before Test, gm	500	As per MORTH Specification for Grade II Vide Table 500.17 Binder Content 5.4% min
2. Weight of Mixture after Test, gm	473	
3. Weight of Binder Extracted, gm	27	
4. Binder content in %	5.4	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: **473** gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500.17
19	0	0.00	0.00	100.00	100
13.2	38	8.03	8.03	91.97	90 - 100
9.5	49	10.36	18.39	81.61	70-88
4.75	99	20.93	39.32	60.68	53-71
2.36	68	14.38	53.70	46.30	42-58
1.18	45	9.51	63.21	36.79	34-48
0.6	43	9.09	72.30	27.70	26-38
0.3	28	5.92	78.22	21.78	18-28
0.15	32	6.77	84.99	15.01	12-20
0.075	25	5.29	90.27	9.73	4-10

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the MORTH Specification/Project Requirement.

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Gooly Consultancy Services Bangalore

Prepared By: Pushpa D B

Tested By: Ashwini

Project Manager

Lab ID : GCS-138-10119-8
Date : 15.03.2021

TEST REPORTS FOR BITUMEN CONTENT & GRADATION OF BITUMINOUS CONCRETE

Name of Client:	Bruhat Bangalore Mahanagara Palike
Address:	Yelahanka Division
Package No:	Package - 04
Name of Work:	Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name Contractor:	M/s Nandi Constructions
Name of PMC:	M/s Gooly Consultancy services, Bangalore
Date of Sample Collection:	13.03.2021
Chainage/Location /Land Mark:	3rd main 4th cross road, Maruthinagar ward 01
Date of testing:	13.03.2021
Type of Mix:	Bituminous Concrete

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
1. Weight of Mixture before Test, gm	500	As per MORTH Specification for Grade II Vide Table 500.17 Binder Content 5.4% min
2. Weight of Mixture after Test, gm	471	
3. Weight of Binder Extracted, gm	29	
4. Binder content in %	5.8	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: 471 gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500.17
19	0	0.00	0.00	100.00	100
13.2	41	8.70	8.70	91.30	90 - 100
9.5	58	12.31	21.02	78.98	70-88
4.75	96	20.38	41.40	58.60	53-71
2.36	67	14.23	55.63	44.37	42-58
1.18	42	8.92	64.54	35.46	34-48
0.6	42	8.92	73.46	26.54	26-38
0.3	30	6.37	79.83	20.17	18-28
0.15	25	5.31	85.14	14.86	12-20
0.075	23	4.88	90.02	9.98	4-10

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the MORTH Specification/Project Requirement.

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Gooly Consultancy Services Bangalore

Prepared By:	Tested By:	
Pushpa D B	Ashwini	Project Manager

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Contact : +91-80-42277023/24, 9535200024, 8431662738, Email : info@goolyconsultancy.com, goolylab@gmail.com, Website : www.goolyconsultancy.com

Lab ID : GCS-138-10119-8
Date : 16.03.2021

TEST REPORTS FOR BITUMEN CONTENT & GRADATION OF BITUMINOUS CONCRETE

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 04
Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name Contractor: M/s Nandi Constructions
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Sample Collection: 15.03.2021
Chainage/Location /Land Mark: 1st Main 16th Cross Road, Maruthinagar ward 01
Date of testing: 15.03.2021
Type of Mix: Bituminous Concrete

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
1. Weight of Mixture before Test, gm	500	As per MORTH Specification for Grade II Vide Table 500.17 Binder Content 5.4% min
2. Weight of Mixture after Test, gm	470	
3. Weight of Binder Extracted, gm	30	
4. Binder content in %	6.0	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: **470** gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500.17
19	0	0.00	0.00	100.00	100
13.2	36	7.66	7.66	92.34	90 - 100
9.5	44	9.36	17.02	82.98	70-88
4.75	78	16.60	33.62	66.38	53-71
2.36	75	15.96	49.57	50.43	42-58
1.18	54	11.49	61.06	38.94	34-48
0.6	38	8.09	69.15	30.85	26-38
0.3	44	9.36	78.51	21.49	18-28
0.15	48	10.21	88.72	11.28	12-20
0.075	18	3.83	92.55	7.45	4-10

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the MORTH Specification/Project Requirement.

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Gooly Consultancy Services Bangalore

Prepared By: Pushpa D B

Tested By: Ashwini

Project Manager

Lab ID : GCS-138-10119-8
Date : 15.03.2021

TEST REPORTS FOR BITUMEN CONTENT & GRADATION OF BITUMINOUS CONCRETE

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 04
Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name Contractor: M/s Nandi Constructions
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Sample Collection: 13.03.2021
Chainage/Location /Land Mark: 3rd main 4th cross road, Maruthinagar ward 01
Date of testing: 13.03.2021
Type of Mix: Bituminous Concrete

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
1. Weight of Mixture before Test, gm	500	As per MORTH Specification for Grade II Vide Table 500.17 Binder Content 5.4% min
2. Weight of Mixture after Test, gm	471	
3. Weight of Binder Extracted, gm	29	
4. Binder content in %	5.8	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: 471 gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500.17
19	0	0.00	0.00	100.00	100
13.2	41	8.70	8.70	91.30	90 - 100
9.5	58	12.31	21.02	78.98	70-88
4.75	96	20.38	41.40	58.60	53-71
2.36	67	14.23	55.63	44.37	42-58
1.18	42	8.92	64.54	35.46	34-48
0.6	42	8.92	73.46	26.54	26-38
0.3	30	6.37	79.83	20.17	18-28
0.15	25	5.31	85.14	14.86	12-20
0.075	23	4.88	90.02	9.98	4-10

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the MORTH Specification/Project Requirement.

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Gooly Consultancy Services Bangalore

Prepared By: Pushpa D B

Tested By: Ashwini

Project Manager

Lab ID : GCS-138-10119-8

Date : 17.03.2021

TEST REPORTS FOR BITUMEN CONTENT & GRADATION OF BITUMINOUS CONCRETE

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 04
Name of Work: Comprehensive development of roads, drains at Maruthinagara 3rd main Road,Mathru layout, Someshwara nagara, Sharada nagara and B sector in ward no - 01, 02 & 04 of Yelahanka Division (Package No - 04)
Name Contractor: M/s Nandi Constructions
Name of PMC: M/s Gooly Consultancy services, Bangalore
Date of Sample Collection: 16.03.2021
Chainage/Location /Land Mark: 1st Main 19th Cross Road, Maruthinagar ward 01
Date of testing: 16.03.2021
Type of Mix: Bituminous Concrete

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Requirements
1. Weight of Mixture before Test, gm	500	As per MORTH Specification for Grade II Vide Table 500.17 Binder Content 5.4% min
2. Weight of Mixture after Test, gm	472	
3. Weight of Binder Extracted, gm	28	
4. Binder content in %	5.6	

GRADATION AFTER EXTRACTION

TOTAL WEIGHT OF SAMPLE: 472 gms

SIEVE SIZE in mm	Weight Retained in gm	% Retained	Cumulative % Retained	% Passing	Requirements as per MORTH Specification Table 500.17
19	0	0.00	0.00	100.00	100
13.2	41	8.69	8.69	91.31	90 - 100
9.5	51	10.81	19.49	80.51	70-88
4.75	77	16.31	35.81	64.19	53-71
2.36	65	13.77	49.58	50.42	42-58
1.18	44	9.32	58.90	41.10	34-48
0.6	52	11.02	69.92	30.08	26-38
0.3	36	7.63	77.54	22.46	18-28
0.15	42	8.90	86.44	13.56	12-20
0.075	20	4.24	90.68	9.32	4-10

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the MORTH Specification/Project Requirement.

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